

# City and County of Honolulu ISWMP Advisory Committee Presentation

Section 7: Public Education

Section 9: Materials Marketing and Procurement

April 3, 2018

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# Agenda Review

- I. WELCOME AND AGENDA OVERVIEW**
- II. FEBRUARY 13, 2018 MEETING MINUTES – COMMENTS OR CORRECTIONS**
- III. REVIEW OF COMMENT/RESOLUTION ON SECTIONS 3, 4 AND 6**
- IV. PRESENTATION AND DISCUSSION – SECTION 7, PUBLIC EDUCATION**
- V. PUBLIC COMMENTS ON SECTION 7**
- VI. PRESENTATION AND DISCUSSION – SECTION 9, MATERIALS MARKETING AND PROCUREMENT**
- VII. PUBLIC COMMENTS ON SECTION 9**
- X. NEXT STEPS, THANK YOU, AND ADJOURNMENT**

## Note on Section 11 (Facility Siting)

- Previously slated to be discussed today
- Section 11 content will be incorporated into the June AC meeting
- Anticipated to be combined with future sections to improve ISWMP readability and to comply more closely with HRS

# February 13, 2018 Meeting Minutes

- Comments
- Corrections

# Review Comment/Resolutions

- Section 3
- Section 4
- Section 6

## Section 7: Public Education

# Public Education

Public education is instrumental to increasing awareness and compliance with solid waste and recycling related policies, programs, and procedures

Can be Achieved Through:

- Printed Materials
- Digital Media
- Presentations
- Enforcement
- The City's goal is to inform the public on options for source reduction, recycling and bioconversion; proper handling and general waste issues
- Designed to reach all sectors of the community

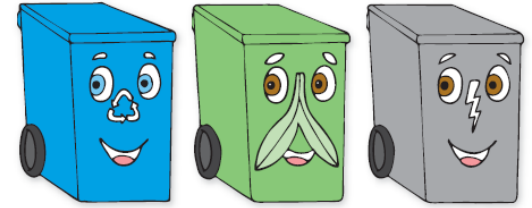


# Legislative

- Per Section 342G-26(g) of the Hawaii Revised Statutes (HRS), the Plan shall describe the programs that the City will use, in coordination with the efforts of the Department of Health (DOH), to:
  - Provide comprehensive and sustained public notice of the options for source reduction, recycling and bioconversion, and for the proper handling of household hazardous and special wastes
  - Distribute information and education materials regarding general solid waste issues through the media, schools and community organizations
- Supporting resolutions and ordinances
  - Resolution 07-356, which supports implementation of recycling workshops in public schools
  - Resolution 07-395, which supports initiation of a curbside recycling education program
  - Revised Ordinances of Hawaii (ROH), Chapter 9-1.9 establishes the Office of the Recycling Coordinator whose top priority is, *“Establishment and implementation of recycling education and promotion programs”*.



# Existing Programs



The City's public education efforts focus on awareness of existing programs, resources, and tools/regulatory mechanisms that promote waste management, source reduction, and recycling practices on the island.

The success of public education efforts is dependent on the effectiveness of the communications describing waste management and recycling activities and the willingness of the community to implement them.



# Digital Content

- Existing

- Website
- WasteLine Blog and e-Newsletter
- Opalavision
- Facebook
- Twitter

- Strategies

- Make improvements to website based on Google Analytics and other tools available
- Maintain *WasteLine*, Opalavision, and social media accounts
- Maintain content on The Learning Center
- Pay to promote social media accounts and target specific demographics and/or geographies
  - Increasing the number of followers may result in a wider reach for educational campaigns



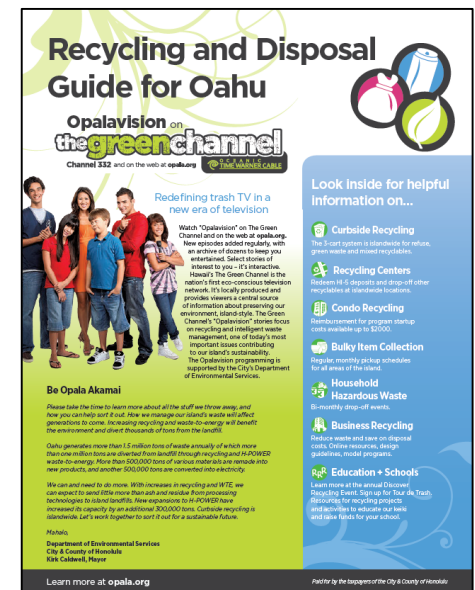
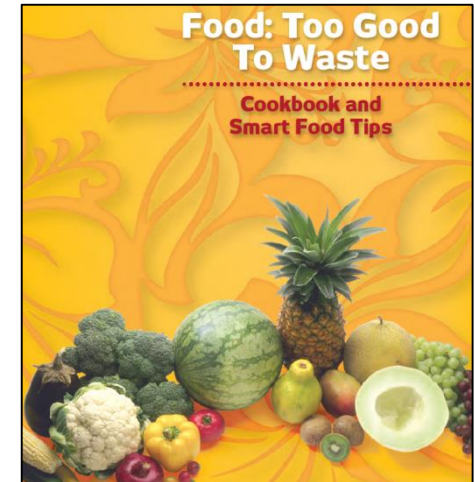
# Flyers, Handouts, and Other Education Materials

- Existing

- Recycling and Disposal Guide
- “Food: Too Good to Waste” Guide
- Stickers (e.g. Bring-Your-Own-Bag and Recycling Handy List)
- Activity Books

- Strategies

- Develop and distribute printed (and electronically available) media, including *Recycling and Disposal Guide*, *Food: Too Good to Waste Guide*, *BYOB stickers*, and activity books
- Consider updating the Recycling and Disposal Guide
  - Capture changes to existing programs including discontinuation of The Green Channel, solid waste facility changes and new programs (Plastic Bag Ban)
  - Cognizant of other planned program developments



# Public Announcements and Updates

## • Existing

- Print Advertisements
  - Detail City services for solid waste disposal and recycling and encourage the public's participation in programs
- Direct Mailers
  - Notify residents of any significant changes to solid waste disposal and recycling programs
- Press Releases
  - Press releases concerning system changes are sent out three to four times per year. News stations may pick up on the press releases, resulting in free advertising for the City

## • Strategies

- Develop and distribute print advertisements, direct mailers, and press releases
- Increase frequency of print advertisement to a quarterly basis



# School Programs

- **Existing**

- Educational Presentations
- The Learning Center
  - Educational guidance, tools and materials for use in the classroom on opala.org
- Partnership with Honolulu Theater for Youth (HTY)
- School Recycling Grant Program
  - Allows teachers to request up to \$100 of recycled products to incentivize students to engage in recycling projects
- Tour de Trash
  - Saturday tours prioritizing educators and students

- **Strategies**

- Update HTY Program with new content, engagement format, or collaboration opportunities
- Offer school recycling program grants



**Honolulu  
Theatre  
for Youth**

# Peer Consulting & Special Events



- **Existing**

- Peer Consulting
  - Representatives of companies with successful recycling programs provide advice to other companies
- Tour de Trash
  - Most popular City Event
  - Includes 3-5 free tours for citizens to learn about businesses involved in recycling and solid waste
- Festivals and Other Public Events such as Mauka to Makai Environmental Expo
  - Celebrates Earth Day
  - Includes educational activities and entertainment

- **Strategies**

- Provide and manage peer consulting program
- Host Tour de Trash
- Pursue opportunities to participate in additional public educational events

# Public Input & Involvement

- **Existing**

- Environmental Concern Line
  - Enables public to report concerns, access information about public disposal, and get involved in clean-up and volunteer programs
- Public Surveys
  - City uses data to evaluate pilot programs and/or make improvements before wider implementation
- Integrated Solid Waste Management Plan Advisory Committee
  - Provides input and advice on solid waste issues, policies, and programs
- Mayor's Advisory Committee on Landfill Site Selection
  - Used to obtain input on locating a future landfill site



# Public Input & Involvement



- **Strategies**

- Host and more frequently update the Environmental Concern Line
- Increase use of public surveys
- Establish an Integrated Solid Waste Management Plan AC for future iterations of the plan and begin process earlier
- Provide technical assistance to citizens on specific subject matter areas
- Restart home composting workshops
- Establish a strategic siting committee for future landfill siting



# Technical Assistance & Enforcement Tools

- Existing

- Technical Assistance – City provides technical assistance on a wide range of topics from recycling program set-up for businesses, schools, and multi-family complexes; compliance with City ordinances; and composting. Citizens can call the Refuse and Recycling Services line (808-768-3200)
- Enforcement Mechanisms – As an enforcement mechanism to educate residents and to address contamination in curbside collected green and blue carts, the City performs inspections of carts and issues reminders or error notices if they find contamination using “Opalagies” cart tags

- Strategies

- Provide technical assistance to citizens on specific subject matter areas
- Increase frequency of cart inspections and compliance enforcement



# Additional Strategies

- Evaluate ways to increase funding for public education programs and initiatives
- Investigate feasibility of designating a Public Education Coordinator position for the Refuse Division
- Consider building a public viewing area or education center at the new refuse facility in Campbell Industrial Park, Kapolei
  - Great for school field trips and community outings
  - Growing trend – provides connection with visitors and users of facility



Children using the learning center at the North Transfer Station in Seattle, WA



Students viewing the Sims Material Recovery Facility in Sunset Park, NY

## Section 9: Materials Marketing and Procurement

# Legislative

Hawaii Revised Statutes (HRS) Chapter 342G-26i requires that the Plan include a marketing and procurement of materials element describing the following:

- Existing county, State, or other markets for materials diverted from the solid waste stream;
- Methods to increase access to markets, including the promotions of local uses for materials derived from solid waste; and
- Methods to promote the procurement of the recycled materials by county agencies



# Roles in Recycled Materials Market

- The City, the State, and commercial recyclers and processors are all key participants in Oahu's overall post-consumer materials management system



## The City:

- Develops and implements ordinances, programs, and policies to guide the capture of material
- Contracts with recyclers/processors to manage waste after collection
- Encourages the procurement of recycled materials and promotes local use by showcasing recycled-content products

## The State:

- Develops statutes and rules and dictates policy and some additional State programs (such as the HI-5 program) to encourage diversion of waste material from the landfill; thus impacting the type of materials entering the post-consumer materials market

## Recyclers & Processors:

- Collect, sort, process, and ship recovered materials to local markets and off-island markets, both on the mainland and in Asia



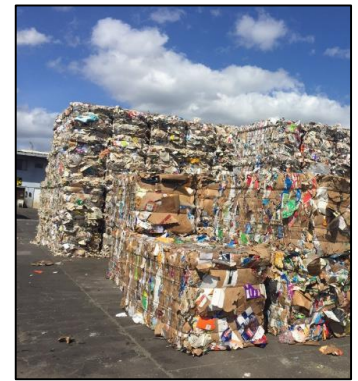
# Challenges for Honolulu

- **The City's remoteness and resultant high transportation costs**—Shipping a standard-sized container of recyclable materials from Honolulu to Asia could cost six times the amount for shipping from Los Angeles to Asia. Because of high transport costs, local processors receive significantly less return for their materials.
- **Lack of competition among shipping lines**—Little competition among the limited number of shipping companies, little incentive to offer reduced freight charges
- **Low supply and demand of recyclables**—Relatively low volume of recyclables and a relatively low demand for end products made from recycled materials on the island
- **High costs**—Expensive costs for land, water, and electricity - hard to compete with the Mainland (example: electricity = \$0.12/kWh Oahu vs. \$0.06/kWh mainland)
- **Impacted by global fluctuations** – Due to Oahu's lack of local recyclable material end users, the economics of recycling programs within the City are significantly impacted by fluctuations in global recycling markets



# Post-Consumer Paper (e.g., used corrugated cardboard, newspaper, office paper, etc.)

- Off-island markets for paper demand low contaminant levels, and pricing has fallen significantly in the past year. In December 2017, the average U.S. pricing for mixed paper was \$29.45 per ton, compared to \$77 per ton in 2016. Additionally, the average U.S. pricing for old corrugated cardboard was \$104.72 per ton in December 2017, fluctuating over the year hitting as low as \$96.67 per ton.



Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Curbside collection of paper  Regulations guiding recycling and reuse  Contracts with paper recyclers	Regulations requiring purchase of recycled paper products	Recycled paper products (e.g. toilet tissue, paper towels, office paper, etc.)	Optimize curbside collection of paper  Continue to enforce City ordinances  Continue to contract with paper recyclers
State	Regulations guiding recycling and reuse	Regulations requiring purchase of recycled paper products		
Commercial	Shipment to the mainland and Asia for recycling/processing	None		

# Post-Consumer Glass

- Oahu markets for glass recycling are low and the market value for recycled glass does not sustain the cost of its recycling. Consequently, glass requires a recycling subsidy.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Non-deposit glass ADF Program  Curbside collection of glass  Contract with a blue bin processor  Identification of future sites for HI-5 redemption centers	Regulations allowing use of crushed glass in road construction	None (regulations are in place for crushed glass reuse but practice is no longer implemented)	Optimize curbside collection of glass  Support and improve accessibility of HI-5 program  Continue to contract with blue bin processors  Solicit proposals for beneficial reuse of glass
State	Non-deposit glass ADF Program  HI-5 Deposit Program	Regulations allowing use of crushed glass in road construction		
Commercial	Shipment to the mainland and Asia for recycling/processing	None		



# Post-Consumer Non-Ferrous and Ferrous Metals

- The demand for aluminum has been consistent and pricing reached a five-year peak of \$2,200 per ton in October 2017. The industry is expecting a correction in price during 2018, but still stable at a projected average of \$2,000 in later 2018.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Curbside, bulky item, convenience center, and select transfer station collection  Contracts with metal recyclers  Identification of future sites for HI-5 redemption centers	None	Recycled metal	Optimize curbside collection of non-ferrous and ferrous metals  Support and improve accessibility of HI-5 program  Continue to contract with metal recyclers
State	HI-5 Deposit Program	None		
Commercial	Shipment to the mainland and Asia for recycling/processing	None		Solicit proposals for the beneficial reuse of Auto Shredder Residue

# Post-Consumer Plastic

- #2 coded plastic, high density polyethylene (HDPE), and #1 coded plastic, polyethylene terephthalate (PET), make up most of the post-consumer plastics stream. Currently, pricing is approximately \$14 per ton for PET bales and less than \$35 per ton for HDPE bales. The main barrier for this market is the difficulty in achieving low contaminant levels in plastic bales.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Curbside collection of plastics  Contracts with a plastic recycler  Regulations for plastic bag usage  Identification of future sites for HI-5 redemption centers	None	Recycled plastic products (e.g. bottles made from recycled plastic, insulation, plastic furniture, etc.)	Optimize curbside collection of plastics  Support and improve accessibility of HI-5 program  Regulate plastic bag usage
State	HI-5 Deposit Program	None		
Commercial	Shipment to the mainland and Asia for recycling/processing	None		

# Green Waste

- Residential green waste is collected at the curb, at convenience centers, and at Kapaa Transfer Station. Green waste is transported to a composting facility contracted by the City, currently Hawaiian Earth Recycling (HER), for the processing of this material into mulch and soil amendment products to conserve water and enrich existing soil.



Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Curbside collection of green waste  Regulations on commercial green waste disposal  Contract with a composting facility	None	Compost, mulch, and other soil amendment products  Compost filter socks	Optimize curbside collection of green waste  Continue to contract with a composting facility  Continue to enforce disposal bans and City ordinances  Investigate new ways to promote the procurement of processed organics
State	None	None		
Commercial	Processing of green waste into mulch and soil amendment products for sale throughout Hawaii	None		

# Additional Organics

- Edible food is donated to food banks for human consumption. Food unsuitable for human consumption can be used as animal feed or composted. HER accepts a limited amount of pre-consumer food waste for their composting operations.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	<p>Regulations on food waste disposal</p> <p>Source reduction campaigns</p> <p>Processing of sewage sludge to make biosolids pellets for use as fertilizer</p>	None	<p>Donations to food banks</p> <p>Compost and soil amendment products</p> <p>Animal feed</p> <p>Biosolids pellets (fertilizer)</p>	<p>Continue to enforce City ordinances</p> <p>Enhance source reduction campaigns</p> <p>Investigate new ways to promote the procurement of processed organics</p>
State	None	None		
Commercial	<p>Donations to food banks</p> <p>Collection of food waste to be used as animal feed</p> <p>Processing of food waste to make compost and soil amendment products</p>	None		

# Used Oil

- Used oils can include motor oil or cooking oil

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	<p>Promotion of used cooking oil recycling methods on the City's website</p> <p>Use B20 biodiesel fuel in certain City vehicles</p>	None	<p>Re-refined motor oil</p> <p>Biodiesel and other fuels</p>	<p>Continue to promote used oil disposal and recycling practices</p>
State	<p>Regulations on used oil recycling</p> <p>Regulations promoting the use of biodiesel</p>	None		
Commercial	<p>Recycling of used oil and oil filters</p> <p>Processing of used cooking oil into products such as biodiesel and animal feed</p>	None		

# Post-Consumer Tires

- In the commercial sector, a large portion of tires are processed by Unitek Solvent Services, while others are shipped to processors on the mainland, with some limited markets present in the State.



Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	<p>Regulations on used tire disposal</p> <p>Collection at convenience centers and transfer stations for processing at H-POWER</p> <p>Contract with a tire recycler</p>	None	<p>Re-treaded tires</p> <p>Feedstock for electricity (H-POWER)</p> <p>TDF</p> <p>Crumb rubber (for use in artificial turf or athletic applications)</p>	<p>Continue to enforce disposal bans</p> <p>Optimize collection of tires at convenience centers and transfer stations for processing at H-POWER</p> <p>Continue to contract with a tire recycler</p>
State	Regulations on retailers and wholesalers to accept used tires	None		
Commercial	<p>Recycling as TDF or crumb rubber</p> <p>Shipment to the mainland for recycling/processing</p>	None		

# Electronic Waste

- Used electronics or “e-waste” includes discarded computers, cell phones, televisions and other electronic products.



Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Source reduction and recycling campaigns	None	Recycled electronic components	Source reduction and recycling campaigns
State	Regulations on used electronics disposal  Regulations on manufacturers to take back electronics (Extended Producer Responsibility)	None		Continue to enforce commercial disposal bans  Investigate additional e-waste management practices
Commercial	Shipment to the mainland for recycling/processing	None		

# Ash

- Current markets for ash are extremely limited, especially with respect to ash produced at H-POWER. However, there is potential for a larger market for the beneficial reuse of ash. Barriers to the market include low acceptance of existing reuse technologies.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Disposal of ash at WGSL	None	Concrete Asphalt	Continue to dispose of ash at WGSL until a reuse alternative is implemented
State	None	None		Solicit proposals for the beneficial reuse of ash
Commercial	Beneficial reuse of ash in concrete	None		



# Untreated Wood

- Barriers to the market include cost-effectiveness to sort wood waste and mainstream acceptance of reuse practices.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Regulations on the disposal of C&D debris and green waste	None	Mulch and soil amendment products  Reuse in local building projects	Continue to enforce disposal bans
State	None	None	Gasifier feedstock	
Commercial	Disposal/recycling of C&D debris at the PVT Landfill  Processing of green waste into mulch and soil amendment products for sale throughout Hawaii  Reuse for local building projects	None		

# Concrete

- While recovery and recycling of aggregates are occurring to some degree on Oahu, specifications limit the materials that can be accepted for reuse (e.g., aggregate sizing and makeup, contaminant levels) and limit the amount of accepted material that can be used.

Market Sector	Existing Methods to Increase Access to Markets	Existing Methods to Promote Procurement	Existing Markets	Future City Strategies
City/County	Regulations on the disposal of C&D debris	None	Reuse as aggregate	Continue to enforce disposal bans
State	Regulations on C&D debris facilities	None		
Commercial	Disposal/recycling of C&D debris at the PVT Landfill  Processing of concrete for sale as aggregate throughout Hawaii	None		

# Recent Events

- Bill 28 (2018) amends charges for City refuse services as set forth in ROH, Section 9-4.2

"(a) Unit Charges for Disposal. For the receipt and disposal of refuse and other solid wastes delivered to disposal facilities by any business or any federal or state agency, the following unit charges shall apply:

<b>Disposal Facility</b>	<b>Unit Charge (per ton)</b>	<b>Unit Charge (per cubic yard or fraction thereof)</b>
H-POWER	\$81.00	\$25.25
Transfer Stations	<del>[\$110.60]</del> <u>\$120.00</u>	<del>[\$34.50]</del> <u>\$37.50</u>
Landfills	<del>[\$81.00]</del> <u>\$120.00</u>	<del>[\$25.25]</del> <u>\$37.50</u>
Transshipment Facilities	<del>[\$81.00]</del> <u>\$120.00</u>	<del>[\$25.25]</del> <u>\$37.50</u> "

# Next Steps

Advisory Committee Meetings (Plan sections in parentheses)	Proposed Dates	
1. Kickoff/Chartering		Completed – Nov. 7, 2017
2. Existing System (1) and Special Wastes (5)		Completed – Jan. 9, 2018
3. Source Reduction (3), Recycling and Bioconversion (4), Household Hazardous Waste and Electronic Waste (6)		Completed – Feb. 13, 2018
4. Public Education (7) and Materials Marketing and Procurement (9)		This Meeting– April 3, 2018
5. Convenience Centers, Transfer Stations (TSs), H-Power, Landfills, and Alternative Technologies (8) and Facility Capacity and Siting (11)	Tue	June 12, 2018
6. Solid Waste Generation (2), Energy Balance (10), System Cost Analysis (12), and Enterprise Zones (14).	Tue	July 10, 2018
7. Implementation Plan (13) and Draft Plan	Tue	September 18, 2018
8. Public Hearing	Tue	November 13, 2018